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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,173	12/02/2005	Federico Pavan	07040.0230	8050

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EXAMINER

CRANE, DANIEL C

ART UNIT	PAPER NUMBER
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3725

MAIL DATE	DELIVERY MODE
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10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,173

Applicant(s)

PAVAN ET AL.

Examiner

Daniel C. Crane

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

REJECTION OF CLAIMS OVER PRIOR ART

Claims 60 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerspacher (4,143,209). See claims 9-12 in Gerspacher where the end product comprises a metal wire having a steel core with a brass coating and can be made into a plurality of wires that are stranded together to form a cord or cable (see also column 3, lines 31-55, of Gerspacher). Thus, the final product is shown by the prior art.

[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.) See MPEP 2113.

Claims 60 and 62 are further rejected under 35 U.S.C. 102(b) as being anticipated by Sawada (4,859,822). See Figure 3 where the metal wire 101 has a metal core 201 and a coating 103. A plurality of wires can be placed together and stranded together (see Example 6). See the above comments relating to the product made by the process.

Claims 32-59 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerspacher (4,143,209) in view of Sawada (4,859,811). Gerspacher discloses at column 2, lines 15-39) the basic claimed method of forming a coated metal wire by thermally treating the metal core, submitting the core to a surface treatment (cleaning/pickling/water rinsing) to prepare the

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core for coating, coating the metal core with a metal coating and drawing the metal-coated metal core to reduce the diameter of the coated core to a finely coated wire. The metal core initially has a diameter of 0.9 to 1.4 millimeters and the final diameter of the coated wire is in the range of 0.08 to 0.40 millimeters. In light of this large reduction in diameter of the wire from its initial size to its final size, it is evident that the final wire will have a smaller coating thickness than originally provided and a smaller core diameter than originally provided. While Gerspacher uses an electroplating process for obtaining the adhesion of the coating to the core, it is common in this art to use other coating provisions that facilitate greater adhesion advantages resulting in high purity and high quality. Thus, impurities are reduced by using a vapor phase coating process along with an improvement in the draw down of the wire. Sawada shows a plasma deposition to be commonly used for this purpose and advantage (see Sawada at column 2, lines 48-68). Accordingly, it would have been obvious to the skilled artisan at the time of the invention to have modified Gerspacher's coating process by using a plasma or sputtering deposition process for the above noted motivation. The speed would have been selected based upon available hardware and desired finishing outcomes. This has not been disclosed as a critical provision. The manner of drying, i.e., by a blower, would have been within the purview of the skilled artisan. Claim 40 is considered inherently performed by Sawada's plasma CVD or chemical vapor deposition or sputtering vapor phase method (see Sawada at column 3, lines 26-33). Similarly, the pressures would have been obvious ranges barring any critical features. Sawada shows two coating chambers at 14. Descaling is commonly performed in the coating art to provide a clean surface for the coating. As to the different dimensions, i.e., thickness, diameters, it is the examiner's position that Gerspacher teaches the basic dimensional variations

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in the initial and final shaping operations by virtue of the fact that the core is coated with a predetermined thickness that results in a finely coated wire having a final diameter of 0.25 mm (see column 4, lines 21-23) with a coating thickness of around 10 Angstroms.

RESPONSE TO APPLICANTS' COMMENTS

Method claim 61 was inadvertently included in the rejection of the product claims 60 and 62 in the previous Office Action. Applicants' response to the Office Action did not include any amendments to the claims. Accordingly, the change in rejections, as noted above, was not necessitated by applicants' response of August 6, 2007. Therefore, the Office Action is not made Final.

Applicant maintains that the rejection of claims 60 and 62 is improper because applicants allege that the claims are not product claims since they depend from method claims. Applicant further notes that dependent claims must include the subject matter recited in the independent claim. Contrary to applicants' comments, claims 60 and 62 are, in fact, product claims because the claims specify "*A metal wire* produced by the method of claim 32..." (emphasis added) or "*A metal cord*....produced by the method of claim 32..." (emphasis added). These are classic product-by-process claims where it is the end product that is determined as to its patentability over the prior art. As noted in the above court decisions, the patentability of the product does not depend upon the process of manufacturing the product. In this regard, the examiner has followed standard practice in accessing the applicability of the prior art against the product by process claims. The end product comprises a metal wire having a metal core with a metal

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coating layer. The applied prior art anticipates such a construction. Gerspacher or Sawada disclose the end wire product.

As to the rejection of the claims over the Gerspacher and Sawada, this combination is considered tenable. Applicants note that the claims must be considered as a whole. This has been done since the applied prior art has only been combined based upon the clear motivation to do so. The combination of Sawada with Gerspacher has not relied upon hindsight because the motivation to combine has been established by the two teachings. In this regard, Gerspacher teaches the basic claimed process where an electrodeposition coating process is used to adhere the coating to the metal core. However, Sawada proffers the use of plasma vapor or sputtering as an improved adhering coating technique within the art of drawing coated wire in manufacturing. Furthermore, Sawada notes the disadvantages to "other coating methods" (column 2, line 49) and, consequently, envisions a vapor phase coating to give better results than the "other coating methods". Sawada teaches that improved adhesion (column 3, lines 26-40), high quality, high purity (column 2, lines 50 and 54) and cleanliness are foreseen. By virtue of the fact that multiple drawing of the CVD coated wire can attain severe thinning of the wire without breakage, better draw-down features (column 2, lines 55 and 56) are evident. Thus, the skilled artisan having the benefit of Sawada's teaching where vapor phase coating is advantageous over "other coating methods" would have been motivated to have modified Gerspacher's "other coating method" of electrodeposition by using a vapor phase coating method. The motivation and suggestion to combine is clearly made evident to the skilled artisan having the benefit of the teachings.

Applicants further maintain that the secondary teaching is not related to the same field of endeavor as that taught by Gerspacher. Thus, applicants surmise that the skilled artisan familiar with the Gerspacher teaching would not look to the Sawada teaching. Contrary to applicants' argument, it is the examiner's position that the fields of endeavor overlap and are clearly ones that the skilled artisan would have been expected to look. The fact that the use of the end products made by Gerspacher and Sawada's processes differs does not detract from this position. Both teachings are directed to wire working that deals with processing of wire so that the wire can be coated, treated and drawn into coated wire. The skilled artisan having a level of skill within this art would have been expected to look to the arts involving the processing of wire regardless of how the processed wire may or may not be used once manufactured in the manufacturing plant. Accordingly, the fields of endeavor for Gerspacher and Sawada are not divergent.

INQUIRIES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D. Crane whose telephone number is **(571) 272-4516**. The examiner's office hours are 7:00AM-3:30PM, Monday through Friday. The examiner's supervisor, Derris Banks, can be reached at **(571) 272-4419**.

Documents related to the instant application may be submitted by facsimile transmission at all times to Fax number **(571) 273-8300**. Applicant(s) is(are) reminded to clearly mark any transmission as "DRAFT" if it is not to be considered as an official response. The Examiner's Fax number is **(571) 273-4516**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DCCrane
September 27, 2007

A handwritten signature in black ink, appearing to read 'Daniel C. Crane', with a stylized, flowing script.

Daniel C. Crane
Primary Patent Examiner
Group Art Unit 3725